

| Set | Items | Description |
|------|---------------------|---|
| S1 | 44949 | (FINGER OR THUMB OR PALM) () PRINT? OR FINGERPRINT? OR THUMB-PRINT? OR PALMPRINT? |
| S2 | 16813036 | SELECT? OR SOME OR INDIVIDUAL? OR SEVERAL? OR MULTIPL? OR - ONLY OR LIMIT? OR FIVE OR SIX OR SEVEN OR EIGHT OR NINE |
| S3 | 4014695 | USER? OR INDIVIDUAL? OR CUSTOMER? OR PERSON? OR EMPLOYEE? |
| S4 | 47300 | S3(3N) (SELECT? OR CHOOSE? OR DECIDE?) |
| S5 | 5523 | S1(2N) (IDENTIF? OR ID OR NUMBER? OR NAME? OR ALIAS?) |
| S6 | 15 | S5 AND S4 |
| S7 | 15 | S6 AND S2 |
| S8 | 2908 | S1(3N) (MULTIPL? OR SEVERAL? OR MORE() THAN() ONE OR PLURAL? - OR TWO OR THREE OR FOUR OF FIVE OR SIX OR SEVEN OR EIGHT OR N-INE OR MANY OR VARIOUS OR DIFFERENT) |
| S9 | 1 | S3(2N) (SELECT? OR CHOOSE? OR DECIDE?) AND S5 AND S8 |
| S10 | 0 | S9 NOT S7 |
| S11 | 497 | S5 AND S8 |
| S12 | 173 | S11 AND S3 |
| S13 | 172 | S12 NOT S7 |
| S14 | 7 | S1(3N) (ID OR IDENTIFIER? OR NUMBER? OR NUMERAL? OR NAME? OR ALIAS) (3N) (LINK? OR ASSOCIAT? OR COMBINE?) |
| S15 | 0 | S1(2N) (NUMBERING? OR ASSIGN(N)NUMBER?) |
| S16 | 723 | S1(2N) (NUMBER? OR NUMERAL?) |
| S17 | 103 | S5(S)S8(S)S3 |
| S18 | 125 | S17 OR S14 OR S9 OR S7 OR S6 |
| S19 | 77 | RD (unique items) |
| S20 | 51 | S19 NOT PY>2000 |
| S21 | 51 | S20 NOT PD=20000531:20020531 |
| S22 | 51 | S21 NOT PD=20020531:20040601 |
| File | 8: Ei | Compendex(R) 1970-2004/May W1 (c) 2004 Elsevier Eng. Info. Inc. |
| File | 35: Dissertation | Abs Online 1861-2004/Apr (c) 2004 ProQuest Info&Learning |
| File | 65: Inside | Conferences 1993-2004/May W2 (c) 2004 BLDSC all rts. reserv. |
| File | 2: INSPEC | 1969-2004/May W1 (c) 2004 Institution of Electrical Engineers |
| File | 94: JICST-EPlus | 1985-2004/Apr W3 (c) 2004 Japan Science and Tech Corp(JST) |
| File | 111: TGG Natl. | Newspaper Index(SM) 1979-2004/May 14 (c) 2004 The Gale Group |
| File | 233: Internet | & Personal Comp. Abs. 1981-2003/Sep (c) 2003 EBSCO Pub. |
| File | 6: NTIS | 1964-2004/May W2 (c) 2004 NTIS, Intl Cpyrght All Rights Res |
| File | 144: Pascal | 1973-2004/May W1 (c) 2004 INIST/CNRS |
| File | 434: SciSearch(R) | Cited Ref Sci 1974-1989/Dec (c) 1998 Inst for Sci Info |
| File | 34: SciSearch(R) | Cited Ref Sci 1990-2004/May W2 (c) 2004 Inst for Sci Info |
| File | 62: SPIN(R) | 1975-2004/Mar W3 (c) 2004 American Institute of Physics |
| File | 99: Wilson Appl. | Sci & Tech Abs 1983-2004/Apr (c) 2004 The HW Wilson Co. |
| File | 95: TEME-Technology | & Management 1989-2004/Apr W4 (c) 2004 FIZ TECHNIK |

22/5/1 (Item 1 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)
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06001896 E.I. No: EIP02066850073

Title: A novel fingerprint image sensing device and recognition algorithm for sensed fingerprint image

Author: Arai, Fumihito; Sun, Zimin; Tsuruno, Jiro; Fukuda, Toshio

Corporate Source: Dept. of Micro System Engineering Nagoya University, Chikusa-Ku, Nagoya 464-8603, Japan

Conference Title: 26th Annual Conference of the IEEE Electronics Society IECON 2000

Conference Location: Nagoya, Japan Conference Date: 20001022-20001028

E.I. Conference No.: 58967

Source: IECON Proceedings (Industrial Electronics Conference) v 3 2000. p 2183-2188 (IEEE cat n 01CB37141)

Publication Year: 2000

CODEN: IEPREA

Language: English

Document Type: CA; (Conference Article) Treatment: A; (Applications)

Journal Announcement: 0202W2

Abstract: A novel **fingerprint** image sensing device, which **combines** the **ID** bar code technique with **fingerprint**, has been proposed and developed. Due to the use of ID bar code, higher security and less recognition time can be ensured. The device has been fabricated using a new micromachining technology. The sensed image with this sensing device consists of both fingerprint patterns and ID bar lines. The corresponding recognition algorithm for the sensed fingerprint image has also been researched and developed. The algorithm extracts an ID bar image and a pure fingerprint image without ID bar lines from the single sensed image. The ID code can be extracted from the ID bar image, and the fingerprint image is processed to realize the fingerprint identification. 8 Refs.

Descriptors: *Object recognition; Electronic document identification systems; Bar codes; Security of data; Algorithms; Pattern matching

Identifiers: Fingerprint image sensing device; Recognition algorithm; Senses fingerprint image

Classification Codes:

723.5 (Computer Applications); 723.2 (Data Processing)

723 (Computer Software, Data Handling & Applications)

72 (COMPUTERS & DATA PROCESSING)

| Set | Items | Description |
|-----|---------|--|
| S1 | 11212 | (FINGER OR THUMB OR PALM) () PRINT? OR FINGERPRINT? OR THUMB- PRINT? OR PALMPRINT? |
| S2 | 3945216 | SELECT? OR SOME OR INDIVIDUAL? OR SEVERAL? OR MULTIPL? OR - ONLY OR LIMIT? OR FIVE OR SIX OR SEVEN OR EIGHT OR NINE |
| S3 | 1107891 | USER? OR INDIVIDUAL? OR CUSTOMER? OR PERSON? OR EMPLOYEE? |
| S4 | 47921 | S3(3N) (SELECT? OR CHOOSE? OR DECIDE?) |
| S5 | 2316 | S1(2N) (IDENTIF? OR ID OR NUMBER? OR NAME? OR ALIAS?) |
| S6 | 27 | S5 AND S4 |
| S7 | 23 | S6 AND S2 |
| S8 | 515 | S1(3N) (MULTIPL? OR SEVERAL? OR MORE()THAN()ONE OR PLURAL? - OR TWO OR THREE OR FOUR OF FIVE OR SIX OR SEVEN OR EIGHT OR N- INE OR MANY OR VARIOUS OR DIFFERENT) |
| S9 | 3 | S3(2N) (SELECT? OR CHOOSE? OR DECIDE?) AND S5 AND S8 |
| S10 | 0 | S9 NOT S7 |
| S11 | 106 | S5 AND S8 |
| S12 | 65 | S11 AND S3 |
| S13 | 17 | S12 AND IC=(G06F? OR H04L?) |
| S14 | 14 | S13 NOT S7 |
| S15 | 12 | S1(3N) (ID OR IDENTIFIER? OR NUMBER? OR NUMERAL? OR NAME? OR ALIAS) (3N) (LINK? OR ASSOCIAT? OR COMBINE?) |
| S16 | 11 | S15 NOT (S14 OR S7) |
| S17 | 0 | S1(2N) (NUMBERING? OR ASSIGN(N)NUMBER?) |
| S18 | 162 | S1(2N) (NUMBER? OR NUMERAL?) |
| S19 | 28 | S18 AND S8 |
| S20 | 9 | S19 NOT (S7 OR S16) AND IC=(G06F? OR H04L?) |

File 347:JAPIO Nov 1976-2003/Dec(Updated 040402)

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File 350:Derwent WPIX 1963-2004/UD,UM &UP=200430

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20/5/4 (Item 4 from file: 347)
DIALOG(R) File 347:JAPIO
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02507268 **Image available**
TRANSACTION PROCESSOR

PUB. NO.: 63-124168 [JP 63124168 A]
PUBLISHED: May 27, 1988 (19880527)
INVENTOR(s): TAKEBAYASHI HAJIME
NOJIMA YOICHI
APPLICANT(s): OMRON TATEISI ELECTRONICS CO [000294] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 61-270609 [JP 86270609]
FILED: November 13, 1986 (19861113)
INTL CLASS: [4] G06F-015/30 ; G07D-009/00
JAPIO CLASS: 45.4 (INFORMATION PROCESSING -- Computer Applications); 29.4 (PRECISION INSTRUMENTS -- Business Machines)
JAPIO KEYWORD: R087 (PRECISION MACHINES -- Automatic Banking)
JOURNAL: Section: P, Section No. 768, Vol. 12, No. 377, Pg. 166, October 07, 1988 (19881007)

ABSTRACT

PURPOSE: To enable ≥ 2 persons to share an account via a family card, etc., in accordance with demand of the account owner by providing **plural fingerprint** collation data memory areas to store the identification numbers and the collation data in pairs into a fingerprint data file.

CONSTITUTION: A fingerprint data file 30 contains an area m(sub 1) where an account number is stored for each account, an area m(sub 2) where the number of registered data is stored, and **plural fingerprint** collation data memory areas m(sub 3-1)-m(sub 3-3) where the identification **numbers** and the **fingerprint** collation data are stored in pairs. In a fingerprint collation mode, the fingerprints of transactors are read by a fingerprint reader and collated with the corresponding fingerprint data. That is, the fingerprint data of the areas m(sub 3-1)-m(sub 3-3) are read out and collated with the fingerprints of the transactors. When coincidence is obtained from said collation, the corresponding individual collation data are registered and the transaction processing is carried out. Thus ≥ 2 persons can share an account by means of a family card, etc., in accordance with the demand of the account owner by using plural memory areas to store the fingerprint collation data.

7/5/23 (Item 15 from file: 350)
DIALOG(R) File 350:Derwent WPIX
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003305364

WPI Acc No: 1982-F3375E/198218

**Personal card identification system - has grid of identifier symbols
representing fingerprint characteristics for electronic conversion**

Patent Assignee: ESTRADA C I (ESTR-I)

Inventor: ESTRADA C I

Number of Countries: 001 Number of Patents: 001

Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week |
|------------|------|----------|-------------|------|------|----------|
| US 4325570 | A | 19820420 | | | | 198218 B |

Priority Applications (No Type Date): US 80146484 A 19800505

Patent Details:

| Patent No | Kind | Lan | Pg | Main IPC | Filing Notes |
|------------|------|-----|----|----------|--------------|
| US 4325570 | A | | 5 | | |

Abstract (Basic): US 4325570 A

The system is used for **individuals** and provides a three point identification check at point-of-transaction to assure accuracy. The system utilises an **individual fingerprint** and an **identifier** which can be correlated to the fingerprint and to a listing of valid identifiers. An identification card is used which has the **individual**'s fingerprint, a grid superimposed over the **fingerprint**, and an **identifier** printed upon it.

The identifier is made-up of a series of **individual** designations or symbols, with each **individual** designation representing a **selected** fingerprint characteristic in respective squares of the grid. A data bank for **individuals** in the system contains a listing of valid identifiers for correlation and validation purposes. The identifier may be made up of alpha, numeric, or alpha numeric designations.

1

Title Terms: PERSON; CARD; IDENTIFY; SYSTEM; GRID; IDENTIFY; SYMBOL;
REPRESENT; FINGERPRINT; CHARACTERISTIC; ELECTRONIC; CONVERT

Derwent Class: P76; T04; T05; T06

International Patent Class (Additional): B42D-015/00; G06K-009/00

File Segment: EPI; EngPI

14/5/6 (Item 6 from file: 347)
DIALOG(R)File 347:JAPIO
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02683470 **Image available**
PERSONAL IDENTIFYING DEVICE USING FINGERPRINT

PUB. NO.: 63-300370 [JP 63300370 A]
PUBLISHED: December 07, 1988 (19881207)
INVENTOR(s): GOTOU YUKARI
APPLICANT(s): MITSUBISHI ELECTRIC CORP [000601] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 62-136105 [JP 87136105]
FILED: May 30, 1987 (19870530)
INTL CLASS: [4] G06K-009/00; **G06F-015/62**
JAPIO CLASS: 45.3 (INFORMATION PROCESSING -- Input Output Units); 45.4 (INFORMATION PROCESSING -- Computer Applications)
JOURNAL: Section: P, Section No. 850, Vol. 13, No. 131, Pg. 33, March 31, 1989 (19890331)

ABSTRACT

PURPOSE: To identify a **person** whose fingerprints are registered with high accuracy by storing the fingerprint data memory of a **fingerprint** collator with **plural fingerprint** data corresponding to identification numbers.
CONSTITUTION: The fingerprint data memory 18 of the fingerprint collator 16 is stored with **plural fingerprint** data corresponding to **identification numbers**. **Fingerprint** data read by a fingerprint data input device 10 corresponding to an identification number is collated with the **plural fingerprint** data registered in the fingerprint data memory 18 corresponding to the identification numbers previously to identify the **person** himself. Consequently, a **personal identifying** device using **fingerprints** is obtained which can **identifies persons** whose **fingerprints** are registered with high accuracy (identification rate).

14/5/8 (Item 8 from file: 347)
DIALOG(R) File 347:JAPIO
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02503485 **Image available**
FINGERPRINT COLLATING DEVICE

PUB. NO.: 63-120385 [JP 63120385 A]
PUBLISHED: May 24, 1988 (19880524)
INVENTOR(s): NOJIMA YOICHI
APPLICANT(s): OMRON TATEISI ELECTRONICS CO [000294] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 61-266346 [JP 86266346]
FILED: November 08, 1986 (19861108)
INTL CLASS: [4] G06K-009/00; **G06F-015/62**
JAPIO CLASS: 45.3 (INFORMATION PROCESSING -- Input Output Units); 45.4 (INFORMATION PROCESSING -- Computer Applications)
JOURNAL: Section: P, Section No. 767, Vol. 12, No. 370, Pg. 35, October 05, 1988 (19881005)

ABSTRACT

PURPOSE: To smoothly collate plural fingers by only giving one registration number to a specific **person**, by storing in advance **fingerprint** patterns of **plural different** fingers, and collating them with a fingerprint pattern which is read.

CONSTITUTION: A CPU 6 receives an input of a registration number, and when the registration number is inputted from a ten-key 3, the CPU retrieves a registration pattern file 7 and retrieves whether a data discriminated by the registration number concerned exists or not. Subsequently, the number of registration patterns thereof is read out of the file 7, (m) for showing the **number** of **fingerprint** patterns which are read for a collation is set to '1', and a fingerprint pattern of a **person** to be discriminated is read from a reader 2. Next, (n) for showing the number of registration patterns which are read out of the file 7 is set to '1', and the n-th registration pattern is read out, and collated with the fingerprint pattern which is read. Thereafter, the result of collation is decided, and at the time of coincidence, a fact that both of them made coincide is displayed on a CRT 5.

14/5/12 (Item 3 from file: 350)
DIALOG(R) File 350:Derwent WPIX
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015387312 **Image available**
WPI Acc No: 2003-448257/200342
Related WPI Acc No: 2003-811605
XRPX Acc No: N03-357565

Fingerprint authorization method for financial transactions, involves comparing input fingerprint sample with fingerprint templates selected based on input fingerprint identification code and ID code stored in database

Patent Assignee: ROBINSON T (ROBI-I)
Inventor: ROBINSON T
Number of Countries: 001 Number of Patents: 001
Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week |
|----------------|------|----------|---------------|------|----------|----------|
| US 20030061172 | A1 | 20030327 | US 2001324229 | P | 20010921 | 200342 B |
| | | | US 2002251305 | A | 20020920 | |

Priority Applications (No Type Date): US 2001324229 P 20010921; US 2002251305 A 20020920

Patent Details:

| Patent No | Kind | Lan | Pg | Main IPC | Filing Notes |
|----------------|------|-----|-------------|-------------------------|---------------|
| US 20030061172 | A1 | 32 | G06F-017/60 | Provisional application | US 2001324229 |

Abstract (Basic): US 20030061172 A1

NOVELTY - The **fingerprint identification (ID)** code input by an **user** and the ID code stored in the central database, are compared based on which **several** matching **fingerprint** templates are selected from the central database. The selected fingerprint templates are compared with the input fingerprint sample, for authenticating further transaction.

USE - For authorizing fingerprint to authenticate financial transactions.

ADVANTAGE - As the matching function is distributed to several local devices, workload on the database is reduced and hence efficient and inexpensive transactions are performed, without using any identity verification tokens.

DESCRIPTION OF DRAWING(S) - The figure shows a general architecture of the fingerprint authorization system.

pp; 32 DwgNo 1/12

Title Terms: FINGERPRINT; AUTHORISE; METHOD; FINANCIAL; TRANSACTION;
COMPARE; INPUT; FINGERPRINT; SAMPLE; FINGERPRINT; TEMPLATE; SELECT; BASED
; INPUT; FINGERPRINT; IDENTIFY; CODE; ID; CODE; STORAGE; DATABASE

Derwent Class: S05; T01; T04; T05

International Patent Class (Main): G06F-017/60

File Segment: EPI